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PETITION FEE

Under 37 CFR 1.17(f), (g) & (h)

TRANSMITTAL

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	10/811,856
Filing Date	March 30, 2004
First Named Inventor	Yukio NAKANO et al.
Art Unit	2188
Examiner Name	M. Padmanabhan
Attorney Docket Number	520.43708X00

Enclosed is a petition filed under 37 CFR 1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of \$ 130.00 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.

Payment of Fees (small entity amounts are NOT available for the petition (fees))

☒ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 50-1417:

☐ petition fee under 37 CFR 1.17(f), (g) or (h) ☒ any deficiency of fees and credit of any overpayments

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☐ Check in the amount of \$ _____ is enclosed.☒ Payment by credit card (From PTO-2038 or equivalent enclosed). Do not provide credit card information on this form.**Petition Fees under 37 CFR 1.17(f):****Fee \$400****Fee Code 1462**

For petitions filed under:

- \$ 1.53(e) - to accord a filing date.
- \$ 1.57(a) - to according a filing date.
- \$ 1.182 - for decision on a question not specifically provided for.
- \$ 1.183 - to suspend the rules.
- \$ 1.378(e) for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.
- \$ 1.741(b) - to accord a filing date to an application under §1.740 for extension of a patent term.

Petition Fees under 37 CFR 1.17(g):**Fee \$200****Fee code 1463**

For petitions filed under:

- \$1.12 - for access to an assignment record.
- \$1.14 - for access to an application.
- \$1.47 - for filing by other than all the inventors or a person not the inventor.
- \$1.59 - for expungement of information.
- \$1.103(a) - to suspend action in an application.
- \$1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.
- \$1.295 - for review of refusal to publish a statutory invention registration.
- \$1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.
- \$1.377 - for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.
- \$1.550(c) - for patent owner requests for extension of time in ex parte reexamination proceedings.
- \$1.956 - for patent owner requests for extension of time in inter partes reexamination proceedings.
- \$ 5.12 - for expedited handling of a foreign filing license.
- \$ 5.15 - for changing the scope of a license.
- \$ 5.25 - for retroactive license.

Petition Fees under 37 CFR 1.17(h):**Fee \$130****Fee Code 1464**

For petitions filed under:

- \$1.19(g) - to request documents in a form other than that provided in this part.
- \$1.84 - for accepting color drawings or photographs.
- \$1.91 - for entry of a model or exhibit.
- \$1.102(d) - to make an application special.
- \$1.138(c) - to expressly abandon an application to avoid publication.
- \$1.313 - to withdraw an application from issue.
- \$1.314 - to defer issuance of a patent.

Name (Print/Type)

Frederick D. Bailey

Registration No. (Attorney/Agent)

42,282

Signature

Date

August 4, 2005

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



520.43708X00

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Yukio NAKANO et al.

Serial No.: 10/811,856

Filed: March 30, 2004

For: STORAGE SYSTEM

**PETITION TO MAKE SPECIAL
UNDER 37 CFR §1.102(MPEP §708.02)**

MS Petition

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

August 4, 2005

Sir:

Applicants hereby petition the Commissioner to make the above-identified application special in accordance with 37 CFR §1.102(d). Pursuant to MPEP §708.02(VIII), Applicants state the following.

(A) This Petition is accompanied by the fee set forth in 37 CFR §1.17(h).

The Commissioner is hereby authorized to charge any additional payment due, or to credit any overpayment, to Deposit Account No. 50-1417.

(B) All claims are directed to a single invention.

If the Office determines that all claims are not directed to a single invention, Applicant will make an election without traverse as a prerequisite to the grant of special status in conformity with established telephone restriction practice.

(C) A pre-examination search has been conducted.

The search was directed towards a storage system. In particular, the search was directed towards the invention set forth in claims 1-20. The invention is directed to, at a minimum, an area assigning method in a storage management system for managing a storage device for storing data, comprising the steps of: holding management information for managing the storage device, area assignment information for managing an area assigning state of the storage device, and history information for managing a history of area assuring and release; obtaining transition of a used amount of a storage by referring to the history information upon receiving an assignment request for temporarily using an area in association with designation of an area size and a using period; determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination.

The search of the above features was conducted in the following areas:

<u>Class</u>	<u>Subclass</u>
707	1, 7, 8, 10, 100, 101, 104.1, 200-206
709	214
711	100, 111-115, 147-156, 161-165, 170-176

Additionally, a computer database search was conducted on the USPTO system EAST.

(D) The following is a list of the references deemed most closely related to the subject matter encompassed by the claims:

<u>U.S. Patent Number</u>	<u>Inventors</u>
5,185,887	Takahashi et al.
5,463,381	Ryu et al.
5,920,869	Wakayama et al.
6,256,645	Mundy

<u>U.S. Patent Publication No.</u>	<u>Inventor(s)</u>
2002/0087539	Muraoka
2003/0065902	Shiga et al.
2005/0021562	Idei et al.

A copy of each of these references (as well as other references uncovered during the search) is enclosed in an accompanying IDS.

(E) It is submitted that the present invention is patentable over the references for the following reasons.

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach or suggest the invention as claimed. In particular, the cited references, at a minimum, fail to teach or suggest as recited in the claims:

a first feature of the present invention as recited in independent claim 1 including determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination;

a second feature of the present invention as recited in independent claim 10 including when the assignment is requested, determining whether or not the requested area can be assigned by calculation from the held history information; and assigning an area with the designated size at the designated period when the area can be assigned as a result of the determination;

a third feature of the present invention as recited in independent claim 12 including determining whether or not a requested area can be assigned by referring to information calculated from the held history information; and assigning an area with a designated size at a designated period to a request source if the area can be assigned as a result of the determination;

a fourth feature of the present invention as recited in independent claim 14 including determining whether or not a requested area can be assigned by referring to information calculated from the held history information; and assigning an area with a designated size at a designated period to a request source if the area can be assigned as a result of the determination; and

a fifth feature of the present invention as recited in independent claim 17 including a processing means comprising: means for determining whether or not a requested area can be assigned at the using period for the assignment request based on the transition of the used amount of the storage; and assigning means for assigning a size and a using period designated by the request and an area when the area can be assigned as a result of the determination.

Further, the cited references fail to teach or suggest the above noted features of the present invention when taken in combination with other limitations recited in each specific claim.

The references considered most closely related to the claimed invention are briefly discussed below:

U.S. Patent No. 5,185,887 (Takahashi et al.) discloses a database management system that includes a dictionary device that is based on a designation from a user to read generation management information so as to indicate it on the display unit. A dictionary file stores generation management information. The generation management system supplies data stored in a data base to a designated file according to the generation management information in the dictionary file. The data base includes one or more files and is directed to

improve the efficiency in searching and updating. (See, e.g., Abstract and column 2, line 14, through column 3, line 59.) However, unlike the present invention, Takahashi et al. does not disclose determining, based on the obtained transition of the used amount of the storage, whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Takahashi et al. at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent No. 5,463,381 (Ryu et al.) discloses a database system in which each node can use data storage devices stored in other nodes. The database system includes a communication network and nodes. The node includes a file control table formed in a memory, a data file storage device, and a data storage request processing unit. The other nodes include file control tables, data file storage devices, and data storage request processing units. A file storage format of the data file storage device is managed by the file control

tables. Each of the nodes communicates with at least one of the other nodes via the communication network, and issues requests to write data into the file data storage device of at least one of the other nodes and to read data under the control of its own data storage request processing unit. If the node determines that its associated file data storage device is filled with data, when requesting to write data into that associated file data storage device, the corresponding data storage request unit requests the node to write the data from the node into the file data storage device corresponding to the node. A bus mutually connects the CPU, the ROM, the RAM, the interface units, the network controllers, and the controller. The data file control table is formed in, for example, the RAM, and the file data storage device corresponds to, for example, the hard disk device. The storage request processing unit corresponds to the CPU. The CPU controls the entire structure of the node in accordance with programs stored in the ROM. An application program is stored in, for example, the floppy disk device, and read out from and written into the RAM. (See, e.g., Abstract and column 1, line 34, through column 2, line 1.) However, unlike the present invention, Ryu et al. does not disclose determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Ryu et al. at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the

present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent No. 5,920,869 (Wakayama et al.) discloses a database management system employing an object identifier to increase the data access speed of the database. An object storage control or management section includes an object handling section, a buffer control section, and a database. The object handler receives an operation request issued for an object from a higher-level system relative to the object storage controller and conducts generation, deletion, acquisition, and/or update of the object. The storage area controller manages the object storage area in the database to allocate or to release an object storage area according to a request of from the object handler. The buffer controller accesses the database to read the contents of an object into a buffer or to write the contents of an object into the database from the buffer so as to register or update the object. Stored in the database are object area control information and objects to be handled. (See, e.g., Abstract and column 1, line 44, through column 2, line 30.) However, unlike the present invention, Wakayama et al. does not disclose determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a

size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Wakayama et al. at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent No. 6,256,645 (Mundy) discloses a storage manager for controlling the assignment of storage locations to users in a situation where a common block of storage is to be shared by a plurality of users in an efficient manner. The storage manager receives a request from a requesting application for a memory area in a memory block shared by a plurality of requesting applications. The storage manager accesses statistical data from a local cache, which the storage manager has previously collected, concerning the amount of storage space which this particular requesting application requires. The storage manager is always involved when a requesting application wishes to be allocated some memory, and acts as a central repository for collecting statistical data about the amount of memory which requesting applications have required in the past. (See, e.g., Abstract and column 2, lines 27-63.) However, unlike the present invention, Mundy does not disclose determining based on the obtained

transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Mundy at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent Publication No. 2002/0087539 (Muraoka) discloses a method and system for database management that includes a database management system for inputting and outputting data to and from a data storage. A data inputting portion receives data to be stored or used by the system. An item definition portion defines the items of data. A record definition portion defines a record and relates items to the record. A temporary data storage portion temporarily stores data taken out from the database. The database management system stores each piece of actual data, stores the definition or characteristics of the item, stores the location characteristics of the record containing that item. When data is to be stored, the database must first be defined at the item definition portion, which holds characteristics of that item for

each item to be stored. The item definition portion determines the location where the item is stored and that location is stored in the item definition portion, as actual item data is received and written into the data storage. (See, e.g., Abstract and paragraphs 15-30.) However, unlike the present invention, Muraoka does not disclose determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Muraoka at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent Publication No. 2003/0065902 (Shiga et al.) discloses a storage system that is connected to a storage managing server and storage managing clients which are designed for management/control of the storage system. A main frame and a data transaction server are connected to the storage system by way of relevant ports for the purpose of storing data in a storage. The data can be stored in the storage from the data transaction server.

The storage system can be set to the state capable of operations, by determining the configuration information of the fiber, address, and path designation for the logical units. The storage system incorporates a storage control mechanism such as a port for controlling the transfer of the data to be stored between the storage and the data transaction server. The configuration information concerning the storage and the connection status of the data transaction server or the main frame connected to the storage is stored in the form of a group or set of configuration information in a configuration information file. By modifying or rewriting the configuration information in response to the command issued from the storage managing server or the storage managing client, it is possible to modify or alter the system configuration setup of the storage and the data transaction server or the main frame. (See, e.g., Abstract and paragraphs 8-18.) However, unlike the present invention, Shiga et al. does not disclose determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Shiga et al. at a minimum does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described

fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

U.S. Patent Publication No. 2005/0021562 (Idei et al.) discloses a computer system, in which servers are connected to storage management apparatuses through a management server. The servers and the management server are connected through a network to each other and the management server and the storage apparatuses are connected through a network to each other. The server includes a controller, an input output unit, a memory, and an interface for connecting the network. An application program stored in the memory is operated on the controller. A storage management program, mapping information, storage pool management information, and storage pool state information are stored in the memory. The storage pool management program is a program operating on the controller and manages physical storage areas of the storage apparatuses as virtual data areas using the mapping information, the storage pool management information and the storage pool state information. (See, e.g., Abstract and paragraphs 4-6.) However, unlike the present invention, Idei et al. does not disclose determining based on the obtained transition of the used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and assigning a size designated by the request, the using period, and the area when the area can be assigned as a result of the determination. More particularly, Idei et al. at a minimum does not teach or suggest the above described first feature of the

present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further does not teach or suggest these features in combination with the other limitations recited in each of the independent claims.

Therefore, since the cited references at a minimum fail to teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 10, the above described third feature of the present invention as recited in independent claim 12, the above described fourth feature of the present invention as recited in independent claim 14 and the above described fifth feature as recited in independent claim 17, and further fail to teach or suggest these features of the present invention in combination with the other limitations recited in each of the independent claims, it is submitted that all of the claims are patentable over the cited references whether said references are taken individually or in combination with each other.

F. Conclusion

Applicant has conducted what it believes to be a reasonable search, but makes no representation that "better" or more relevant prior art does not exist. The United States Patent and Trademark Office is urged to conduct its own

complete search of the prior art, and to thoroughly examine this application in view of the prior art cited herein and any other prior art that the United States Patent and Trademark Office may locate in its own independent search. Further, while Applicant has identified in good faith certain portions of each of the references listed herein in order to provide the requisite detailed discussion of how the claimed subject matter is patentable over the references, the United States Patent and Trademark Office should not limit its review to the identified portions but rather, is urged to review and consider the entirety of each reference, and not to rely solely on the identified portions when examining this application.

In view of the foregoing, Applicant requests that this Petition to Make Special be granted and that the application undergo the accelerated examination procedure set forth in MPEP 708.02 VIII.

G. Fee (37 C.F.R. 1.17(h))

The fee required by 37 C.F.R. § 1.17(h) is to be paid by:

☒ [X] the Credit Card Payment Form (attached) for \$130.00.


☐ [] charging Account _____ the sum of \$130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.,
Deposit Account No. 50-1417 (Atty. Docket No. 520.43708X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



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